

**A new species of *Homotoma* from NE New Guinea  
(Homoptera : Psyllidae)\***

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ニューギニアから発見されたヒゲブトキジラミ属の一新種

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ヒゲブトキジラミ属は、ネッタイキジラミ亜科 (*Carsidarinae*) の中でも、触角の構造と前翅の脈相が特異な点で顕著なグループである。これまでに9種が世界から知られていたが、東北ニューギニアから一新種が、ハワイのビショップ博物館のグレスITT博士により発見された。オーストラリア区からこの属が記録されるのは、今回がはじめてである。本論文ではこの新種の記載がなされているが、この種は、前翅の径分脈と中脈が基半でかなり癒合しているにもかかわらず、径分脈と中脈によってできる間室が、前縁に開いているという点で、東南アジアの近縁の種とかなりかけはなれている。

The genus *Homotoma* appears to be one of the most distinct group morphologically among *Carsidarinae*. The thickened and densely hairy antennae are quite characteristic of the genus as well as its peculiar venation. Up to the present, 9 species have been described, and most of them are tropical or subtropical, in spite of two species extending up to Japan and two to S. Europe. According to the biological information obtained, they are associated with the fig plant, *Ficus* spp. (Moraceae). As this group of plant is quite diversified in the tropical Asia to the north Australian region, it appears that the relating psyllids are more or less affected also, suggesting possibility of new discovery.

The tenth species of *Homotoma* was, thus, newly found in North East New Guinea by Dr. J. L. GRESSITT, and it is described in the present paper. The specific name of the present new species is dedicated to him. This is the first record of the genus from the Australian region. Any biological information including host-relationship of the species could not be obtained.

Before going further, I wish to express my sincere appreciation to Dr. J. L. GRESSITT, Bernice P. Bishop Museum who kindly placed the material of the museum at my disposal and has been a great source of encouragement in the course of studying New Guinean psyllids.

***Homotoma gressitti* sp. nov.**

Color: General color reddish brown; antenna black, except 4 basal segments which are dull brown (Fig. 1-2); abdomen dark brown to black; genital segments light brown;

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Studies on Psyllidae from New Guinea, I.

fore and middle legs, and terminal tarsi of hind legs dark brown; hind legs (exclusive of terminal tarsi) yellowish brown; forewing transparent, with three dark brown stripes, running along veins Cu and Cu<sub>1</sub>, veins R<sub>1</sub> and Rs, and vein M<sub>1+2</sub> respectively (Fig. 1-3).

Structure: Head (Fig. 1-1) with long pubescence, slightly narrower than thorax. Vertex nearly straight at posterior margin, with a deep impression on each side of median line, with an antennal socket which is strongly swollen apically directed dorso-ectad. Eyes brown, hemispherical; ocelli large. Frons visible definitely; genae swollen ventrad. Antenna (Fig. 1-2) very stout, strongly and densely haired, with one long preapical spine, which is as long as segment IX, relative lengths of the antennal segments as 6:5:21:11:9:8:7:7:5:2.

Thorax robust, with long hairs dorsally; pronotum rather long, about 1/3 as long as wide, deflected anteriorly; praescutum and scutum arched; postscutellum long, nearly as long as wide, with median suture longitudinally, with a long conical and rectangular process on each side of suture. Forewing (Fig. 1-3) large, about 2.4 times as long as wide, pointed at apex; costal margin of forewing roundly arched; veins with long hairs; M contiguous with Rs for about 2/3 length of latter; cell 2r subparallelogrammic, about 1/2

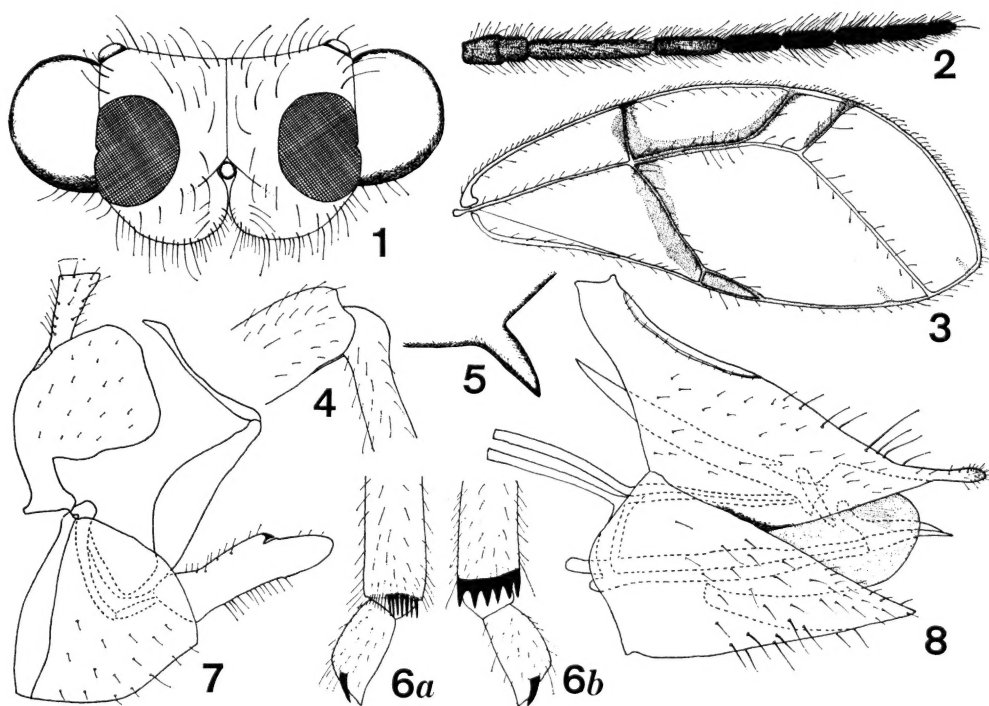


Fig. 1. *Homotoma gressitti* sp. nov. 1, Head, frontal view, ♂; 2, Antenna, ♂; 3, Forewing, ♂; 4, Hind tibia, ♂; 5, Meracanthus, ♂; 6, Apices of hind tibia and proximal segment of hind tarsi, ♂ (a, outer side; b, inner side); 7, Male genitalia; 8, Female genitalia.

as large as cell *lr*. Hind wing long and slender, about  $\frac{2}{3}$  as long as forewing, nearly 3 times as long as wide, with venation of distinctly psylline. Legs massive; hind tibia without basal spur (Fig. 1-4), apically with 6 inner, stiff spurs (Fig. 1-6b) and 7 outer, soft spines (Fig. 1-6a); proximal segment of hind tarsi with 2 black claws (Fig. 1-6a, 6b); meracanthus (Fig. 1-5) rather long, apically directed ventrad and ectad. Abdomen (excl. genital segments) rather long, about as long as thorax.

Male genitalia in profile (Fig. 1-7) moderately large, strongly sclerotized; subgenital plate subtriangular in profile, anterior margin rather straight, posterior margin rounded; proctiger in profile stout, nearly as high as forceps, with basal half strongly narrowed like stalk of the rest, with frontal margin arched roundly, greatly produced caudad into an enveloping posterior subquadrate lobe; terminal segment of proctiger nearly  $\frac{1}{3}$  as high as latter, pubescent, with anterior margin quite straight, with dorsal margin nearly truncate, tapering to an acute apex; forceps in profile slender, with anterior margin rather straight, bearing a large black incurved tooth, with posterior margin sinuate, with inner pubescence, tapering to blunt apex; aedeagus long, relative lengths of the aedeagal segments as 4:3, with basal segment stout at apical half. Female genitalia in profile (Fig. 1-8) moderately large,  $\frac{1}{2}$  as long as the rest of abdomen, also heavily sclerotized; dorsal valve stout, longer than ventral valve, with apical part very slender, with dorsal margin attenuate toward blunt and slightly upturned apex, pubescent; ventral valve in profile broad, wedge-shaped, tapering to acute apex, pubescent; inner valve slightly shorter than dorsal valve, but longer than ventral valve.

Length of body ♂ 2.1-2.3 mm, ♀ 2.3-2.5 mm; to tip of folded wings ♂ 3.7-4.1 mm, ♀ 4.1-4.3 mm; length of forewing ♂ 3.2-3.5 mm, ♀ 3.6-3.7 mm; width of forewing ♂ 1.3-1.4 mm, ♀ 1.5-1.6 mm; length of hind wing ♂ 2.2 mm, ♀ 2.3-2.5 mm; width of hind wing ♂ 0.6 mm, ♀ 0.7-0.8 mm; length of antenna ♂ 1.9 mm, ♀ 1.9-2.2 mm (A female specimen (Fig. 2-3) collected at Daulo Pass, 2400 m is extraordinarily huge, and its measurement is not included above but shown as follows: length of body 3.1 mm, to tip of folded wings 5.3 mm, length of forewing 4.5 mm, width of forewing 2.0 mm, length of hind wing 3.0 mm, width of hind wing 1.0 mm, length of antenna 2.6 mm.)

Holotype (♀) (Fig. 2-1): Ahl V., Nondugl 1750 m, NE New Guinea, 8 July 1955, J. L. Gressitt leg. (deposited in the collection of Bernice P. Bishop Museum, Honolulu).

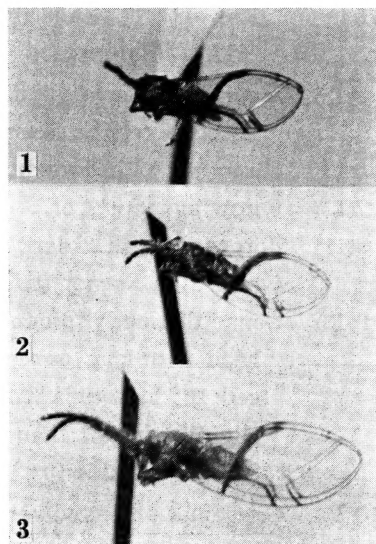


Fig. 2. *Homotoma gressitti* sp. nov., ♀. 1, Holotype, Ahl V., Nondugl 1750 m; 2, Miramar, Asaro V., 1800 m; 3, Daulo Pass 2400 m (Asaro-Chimbu div.).  $\times 5.5$

Paratopotypes: 2 ♀, the same data as the holotype. Paratypes: 1 ♂, Numbu, Upper Chimbu V., 2400 m, NE New Guinea, 5 July 1955, in light trap, J. L. Gressitt leg.; 1 ♂ 3 ♀ (1 ♀ on slide) (Fig. 2-2), Miramar, Asaro V., 1800 m, NE New Guinea, 27 June 1955, J. L. Gressitt leg.; 1 ♀, Daulo Pass, 2400 m, Asaro-Chimbu div., NE New Guinea, 15 June 1955, J. L. Gressitt leg.; 1 ♀ (teneral), Miramar-Gaoayabo, Asaro V., 2000 m, NE New Guinea, 29 June 1955, J. L. Gressitt leg.

Distribution: New Guinea (NE).

The present new species is very similar to *H. distincta* from Bengal in venational characters, but can be separated from it and the other known species of the genus by the following key.

#### Key to species of *Homotoma*

- 1(14) Cubital cell much smaller than medial cell; radius and media quite or nearly contiguous for a greater or less length.
- 2(5) Medial vein contiguous with radius for nearly or quite the entire length of latter, leaving no cell or only a very small one between them.
- 3(4) Insect large, about 6 mm long to tip of folded wings; costal margin of forewing roundly arched, wing nearly 2 times as long as wide ..... *bakeri* CRAWFORD, 1915. Malaya (Penang I.), Philippines (Luzon I., Mindanao I.).
- 4(3) Insect smaller, about 3 mm long to tip of folded wings; costal margin of forewing less arched, wing about 3 times as long as wide ..... *bilineata* CRAWFORD, 1917. Philippines (Luzon I.), Thailand.
- 5(2) Medial vein contiguous with radius for about one-half length of latter, leaving an open cell between them on costal margin.
- 6(13) Forewing with dark brown stripe along veins.
- 7(12) Forewing with 2 or 3 dark brown stripes, cell 2r more or less smaller than 1r.
- 8(11) Forewing with 2 dark brown stripes, one running along Rs, the other along Cu and Cu<sub>1</sub>; Rs not parallel with M<sub>1+2</sub>.
- 9(10) Genae distinctly produced ventrad; posterior margin of vertex almost straight; head with long pubescence densely; cell 2r of forewing scarcely smaller than cell 1r; hind tibia with only 4 outer spurs apically; proctiger of male genitalia slightly shorter than forceps ..... *boheae* YU, 1956 S. China (Fukien).
- 10(9) Genae not projected ventrad, nor ectad; posterior margin of vertex weakly curved; head with sparse pubescence; cell 2r of forewing much smaller than 1r; hind tibia with 4 inner and 6 outer spurs apically; proctiger of male genitalia nearly as high as forceps ..... *radiata* KUWAYAMA, 1908 Taiwan, Japan.

- 11(8) Forewing with 3 dark brown stripes, running along  $R_1$  and  $Rs$ ,  $M_{1+2}$ , and  $Cu$  &  $Cu_1$ ;  $Rs$  parallel with  $M_{1+2}$ ; genae produced ventrad; hind tibia with 6 inner and 7 outer spurs apically ..... *gressitti* sp. nov.  
New Guinea (NE).
- 12(7) Forewing with only one dark brown stripe, running along vein  $Rs$ ; cell 2r slightly larger than 1r.....*unifasciata* YU, 1956  
S. China (Fukien), Japan (Kyushu, Shikoku, Honshu).
- 13(6) Forewing without dark brown stripe along veins, but  $R$  black; cell 2r slightly smaller than 1r; genae short .....*distincta* CRAWFORD, 1912  
Bengal (Pusa).
- 14(1) Cubital cell nearly as large as medial cell; radius and media not contiguous.
- 15(16) Forewing with  $M_{1+2}$  ended at apex;  $Rs$  short, ending at about middle of wing  
..... *pacifica* CRAWFORD, 1915  
Philippines (Luzon I.).
- 16(15) Forewing with  $M_{1+2}$  ended at anterior margin;  $Rs$  rather long, ending beyond middle of wing.
- 17(18) Forewing with conspicuous brown bands along veins  $M_{1+2}$ ,  $M_{3+4}$ ,  $Cu_1$  and  $Cu_2$ ; general color brown; posterior margin of male proctiger without caudal lobe; length of apex of male forceps in dorsal view 2 times as long as broad .....  
..... *ficus* (LINNAEUS, 1767)  
S. Europe.
- 18(17) Forewing without conspicuous brown band along veins or with only obscure band along  $Cu_1$ ; general color green; posterior margin of male proctiger with a distinct lobe projecting caudad; length of apex of male forceps in dorsal view 3 times as long as broad .....*viridis* KLIMASZEWSKI, 1961  
S. Europe (Albania, Yugoslavia, Bulgaria).

#### References

- CRAWFORD, D. L. 1912. Indian Psyllidae. Rec. Indian Mus. 7(5): 433.  
 ———— 1915. Ceylonese and Philippine Psyllidae (Homoptera). Phil. J. Sci. 10(4, D): 262-263.  
 ———— 1917. Philippine and Asiatic Psyllidae. Phil. J. Sci. 12 (3, D): 164.  
 KLIMASZEWSKI, S. M. 1961. Notatki psyllidologiczne I-II (Homoptera). Ann. Zool. 19 (3): 114-116.  
 KUWAYAMA, SH. 1908. Die Psylliden Japans I. Trans. Sapporo Nat. Hist. Soc. 2: 181-182.  
 YU, F. L. 1956. Notes on Psyllidae (Homoptera) from Fukien and Taiwan, China (1). Mem. Coll. Agr. Nat. Taiwan Univ. 4(3): 44-46.

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- CRAWFORD, D. L. 1912. Indian Psyllidae. Rec. Indian Mus. 7(5): 433.  
 ———— 1915. Ceylonese and Philippine Psyllidae (Homoptera). Phil. J. Sci. 10(4, D): 262-263.  
 ———— 1917. Philippine and Asiatic Psyllidae. Phil. J. Sci. 12 (3, D): 164.  
 KLIMASZEWSKI, S. M. 1961. Notatki psyllidologiczne I-II (Homoptera). Ann. Zool. 19 (3): 114-116.  
 KUWAYAMA, SH. 1908. Die Psylliden Japans I. Trans. Sapporo Nat. Hist. Soc. 2: 181-182.  
 YU, F. L. 1956. Notes on Psyllidae (Homoptera) from Fukien and Taiwan, China (1). Mem. Coll. Agr. Nat. Taiwan Univ. 4(3): 44-46.